

ABSTRACT

An ozone hemodiafiltration device comprising a dialysate fluid circuit, extracorporeal circuit for blood and a replenishing solute circuit. The dialysate fluid circuit provides aseptic isotonic solution with mineral and nutrients in specific ratio to a dialyzer. The extracorporeal circuit for blood draws blood flow from human bodies, passes through the dialyzer, and turns back to human bodies. The replenishing solute circuit conducts the isotonic solution from the dialysate fluid circuit into a filter for re-filtration and the re-filtered isotonic solution is injected into human bodies through the extracorporeal circuit for blood. The device features on an ozone (O₃) generator, which converts the reverse osmosis water into ozone water solution, disposed before the water inlet end of the dialysate fluid circuit. By controlling the flow of ozone water solution into the extracorporeal circuit for blood and the replenishing solute circuit, the ozone in blood keeps at 3-6 ppm concentrations.